

PATENTS
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Nash	Art Unit:	1631
Serial No.:	09/373,018	Examiner:	M. Moran
Filing Date:	August 11, 1999		
Title:	Method for Producing and Screening Mass-Coded Combinatorial Libraries for Drug Discovery and Target Validation		

Commissioner for Patents
Washington, DC 20231

CERTIFICATION UNDER 37 CFR § 1.8(a)

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8/14/01

Date of Signature and
of Mail Deposit

Jo-Ann Bergantino

SUPPLEMENTAL RESPONSE TO RESTRICTION REQUIREMENT

Dear Commissioner for Patents:

This reply is responsive to the Office communication mailed on June 14, 2001. Applicants respectfully disagree with the Examiner's assessment that their reply filed on March 30, 2001 was not fully responsive to the prior Office Action.

In the reply filed on March 30, 2001, Applicants made provisional election of the species wherein the scaffold precursor is a fused ring system with acid chloride reactive

groups, and the peripheral moiety precursors are amines. Support for the elected scaffold precursor may be found, *inter alia*, at page 15, compound (b), which compound comprises a fused carbazole ring system and four reactive groups R. As disclosed at page 17, lines 6-8 and lines 25-27, in one embodiment, the reactive group of the scaffold precursor is an electrophilic group, which may be an acyl chloride.

At paragraph 1, the Office communication contends that the reply filed on March 30, 2001 was not fully responsive for failure to elect a species of peripheral moiety precursors from among those disclosed in the specification. In particular, the Office communication asserts that the specification does not teach a peripheral moiety precursor that is an amine, but rather teaches peripheral moiety precursors which comprise amino groups. Applicants disagree.

One of skill in the chemical arts would understand the term "amine", as used in the election at page 2 of the reply filed on March 30, 2001, to refer to a chemical compound that comprises an amine functional group. For example, each of the peripheral moiety precursors illustrated at page 19 is an amine. The Examiner points to example 11 at page 22 to support the proposition that the specification teaches that peripheral moiety precursors comprising amino groups can react to *form* amines, but cannot themselves *be* amines. In fact, example 11 at page 22 supports Applicants' interpretation of the term "amine". One of skill in the art would understand that an amine, by definition comprising an amine functional group, will react with an aldehyde or ketone under reducing conditions to form a new amine compound, wherein the amine functional group bears an additional alkyl substituent. Thus, in the reductive amination chemistry of example 11, the peripheral moiety precursors and the resultant library compounds are all amines.

As disclosed at page 19 of the specification, a variety of scaffold precursors and peripheral moiety precursors with complementary reactive groups may be employed in the practice of the invention. Non-elected peripheral moiety precursors, as described at pages 21-22, include isocyanates, alcohols, tributyl tin compounds, aldehydes, ketones, and phosphorous ylides, chemical compounds which comprise an isocyanate, hydroxy,

tributyl tin, aldehyde, ketone, or phosphous ylide functional group, respectively. Applicants have elected the embodiment of the invention according to example 1 at page 20, wherein the peripheral moiety precursors are amines, and the scaffold precursor comprises one or more acid chloride functional groups. In the elected invention, therefore, the acid chloride functional groups of the scaffold precursor react with the primary or secondary amine functional groups of the peripheral moiety precursor amines to form a combinatorial library comprising compounds of the general formula XY_n , wherein X is a scaffold and each Y is a peripheral moiety, and each Y is attached to X by way of an amide bond. Therefore, Applicants have elected a single species of the invention, as defined by the chemistry employed in the construction of the combinatorial library.

The Office communication appears to require not only election of the reactive group on the peripheral moiety precursor, but also election of a single chemical structure for the remainder of the peripheral moiety precursor. By definition, however, combinatorial libraries include compounds of diverse chemical structure. In the practice of the claimed invention, combinatorial libraries are formed by reaction of a scaffold precursor with a collection of structurally diverse peripheral moiety precursors. It simply is not possible to elect a single peripheral moiety precursor compound without negating the combinatorial nature of the invention.

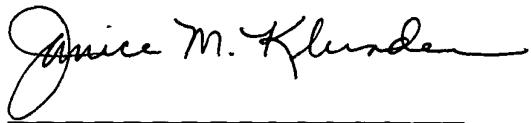
In view of the foregoing remarks, Applicants submit that the reply filed on March 30, 2001 was fully responsive. Accordingly, Applicants respectfully request prompt examination and allowance of the instant application. Should the Examiner continue to find Applicants' reply to be nonresponsive, the Examiner is invited to call the undersigned to arrange an interview with the Examiner and the Examiner's supervisor to discuss this matter further.

Applicants enclose a Petition for a One-Month Extension of Time pursuant to 37 C.F.R. § 1.136, up to and including August 14, 2001, for responding to the Office communication mailed on June 14, 2001.

No other fees are believed to be due in connection with this response. However, pursuant to 37 C.F.R. § 1.136(a)(3), the Examiner is authorized to charge any fee under 37 C.F.R. § 1.17 applicable in the instant, as well as in future communications, to Deposit Account No. 08-0219. Such an authorization should be treated as a constructive petition for extension of time in the concurrent as well as future communications in the above-identified application.

Please also charge any payments due or credit any overpayments associated with this matter to our Deposit Account No. 08-0219.

Respectfully submitted,



Janice M. Klunder, Ph.D.
Reg. No. 41,121

August 14, 2001

HALE AND DORR LLP
60 State Street
Boston, MA 02109
Tel: (617) 526-6771
Fax: (617) 526-5000